

HIGH DUCTILITY, HIGH HOT TENSILE STRENGTH TUNGSTEN WIRE AND METHOD OF MANUFACTURE

ABSTRACT OF THE DISCLOSURE

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A method for manufacturing a high ductility and high hot tensile strength tungsten wire for incandescent lamp filaments is disclosed. The method comprises the steps of preparing a tungsten alloy, swaging a tungsten rod from the alloy, and drawing the swaged rod to wire size in multiple drawing passes. In the method, the wire is annealed between predetermined
10 draws. It is proposed that an annealing is performed before the final drawing pass, by annealing the wire at a temperature between 1100-1300 ° C.

There is also provided a tungsten wire for incandescent lamp filament, which has high ductility and high hot tensile strength. The tungsten wire of the invention has a cold tensile strength - hot tensile strength ratio not exceeding 3.5.

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Fig. 5.